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REVIEW

BY MIKE METLAY

Echo Digital Audio has been a player in the computer-audio game for decades. When it first became feasible to add high-resolution audio I/O to computers, Echo was there with early PCI-based audio solutions and multichannel breakout boxes, offering unprecedented routing flexibility and exceptional audio conversion.

Echo established a reputation for high-end portable audio conversion in the 2000s with a series of CardBus- and ExpressCard-based interfaces like the Indigo IO (reviewed October 2004) and Indigo IOx (September 2009), and with some of the



Echo Digital Audio Echo2

Mic and guitar audio with no compromises, with or without a computer



best FireWire-based portable interfaces on the planet. I still carry an AudioFire2 (reviewed March 2008) with me almost all the time, as an integral part of a highly trustworthy portable-listening environment for music critiquing, editing, and reviews.

In recent years, though, Echo hasn't been in the news much for end-user audio solutions; the company's current main thrust is in the realm of Audio Video Bridging for networked audio (see echoavb.com for more information). So I was intrigued to learn that just this year, Echo had discontinued most of the AudioFire interfaces and released a single small USB interface, the Echo2, with very little fanfare.

My curiosity was piqued; with the AudioFire2, I had felt that a certain watershed had been reached, a combination of portable convenience and impeccable audio that had been challenged by comparatively few other companies (Apogee comes to mind). What could Echo bring to the table with the Echo2 that would make it worthy of investigation?

Elegance inside and out

The Echo2 is a portable dual mic preamp with instrument inputs and headphone monitoring output, with built-in USB 2.0 audio interface with up to 24-bit/192 kHz audio resolution. It offers two inputs, four outputs, near zero-latency monitoring, a comprehensive set of onboard metering and control features, and handy accessories for a variety of stage and studio applications, all in a unique and appealing package.

The first thing you notice about the Echo2 when it comes out of the box is how it's been exceptionally well-designed for portability. My only gripe with the compact and very rugged AudioFire2 is the danger of its exposed volume pot suffering damage... to the point where I've actually considered sawing off the shaft of the pot partway down, to minimize the chances of it getting caught on or hit by anything in my fearsomely over-stuffed laptop bag!

In contrast, the Echo2 doesn't have any exposed pots or encoders... in fact it doesn't have any mechanical controls at all. Instead, there's a smooth, elegant Lexan touch surface like that of a smartphone, with large and easy-to-read selector controls and a pair of stereo LED meters surrounding a long, LED-enhanced level adjustment touch-strip. This is the first audio interface I'm aware of that passes the Laptop Bag Test with a perfect score.

The slightly tapered case is just thick enough at the back for a pair of 1/4" TRS balanced inputs and a pair of 1/4" TRS balanced outs, plus a mini-B USB connector in one corner. The thinner front edge offers a single minijack for headphone output, and there's a jack for an included wall-wart AC power supply on the right side of the case.

If you're using the Echo2 without a computer, or if you're hooking up mics that need phantom power—or if you hear USB-related digital noise, which Echo cautions *might* happen on some computers but never did in my tests—then the AC supply is mandatory. Otherwise the Echo2 happily operates on bus power.

The Echo2 comes with a pair of short XLR/TRS adapter cables for hooking up mics, and a mic stand bracket that attaches to the box via a recessed threaded mounting hole on the bottom of the case.

I have the touch

The touch panel of the Echo2 is designed to respond differently than that of a conventional touchscreen device such as a smartphone or iPad; because one doesn't normally want to be constantly changing settings, it's set up to ignore momentary touches anywhere on the screen. To activate any function, you have to lightly touch the panel and hold your finger there for a half-second or so; secondary functions are activated with a long 2-second touch.

In particular, the level control strip takes some getting used to; it ignores all touches anywhere except right next to the highest lit level LED, so an accidental touch doesn't drop your output volume to near silence or send it to ear-shattering levels. It seems counterintuitive to have to practice using a touchscreen, but once you get the hang of the Echo2 you appreciate how it never resets itself or does anything silly just in the course of being handled.

The touch panel offers two input select controls that cycle through line-level, mic-level, and guitar; when a cable is unplugged, the input automatically resets itself to line level for safety's sake, and any input selection change resets the gain to 0 dB to prevent sudden level jumps or feedback. A +48V button activates global phantom power for both inputs.

The six buttons below the Input and Output level meters select what's being controlled by the Level touch strip—Input 1 and Input 2 Gain, Monitor Level, Main Output Level, and Headphone Level. The sixth button mutes the Main Outputs but not the Headphones. The bottom of the Level control's travel for each output is a hard mute. Holding the Headphone button for 2 seconds switches between playing back its own stereo signal, or mirroring the Main Outputs.

Computer? What computer?

It's tempting to think of the Echo2 as a USB interface, since that's its most obvious function, but Echo doesn't describe it as such; in fact, the description of computer use comes near the end of its manual. First and foremost, the Echo2 is a high-quality dual mic preamp with instrument inputs, designed to travel anywhere.

As a mic preamp and instrument DI, the Echo2 offers some pretty fearsome specs, including a -129 dBu equivalent input noise, 115 dBA dynamic range, and a frequency response that's flat to within 0.1 dB from 10 Hz to 20 kHz. There's a whopping 63 dB of gain available on each input, taking the Line inputs from 0 dB to +63 dB, the Guitar inputs from +6 to +69 dB (with a 1 Megohm input impedance that helped make my test guitars sound great), and the Mic inputs from +12 to

+75 dB. Yes, you read that right... +75 dB, with little or no audible increase in noise floor until you get to the very highest gain settings. While its 1.8 kilohm input impedance might not be ideal for some vintage ribbon mics, there's certainly no issue with available gain for any source.

The Echo2 offers a handy feature called EZ Trim. Hold either Input Gain button for 2 seconds until it starts to flash, then play or sing as loudly as you can for up to 12 seconds; the Echo2 will set itself so the loudest signal it heard in that 12 seconds equals 2 dB below clipping.

As a preamp or DI, the Echo2 doesn't try to add anything to your signal; it falls very much into the straight-wire-with-gain camp, and provides a clear, uncolored sound for your DAW, PA, or effects rack. As a guaranteed clean signal source you can always have with you, it's an exceptional choice.



Okay, NOW add a computer

The Echo2 is class-compliant on Mac OS X 10.6.8 or better and comes up as an audio interface without any downloads or installations; on Windows XP/Vista/7 (and presumably 8, although I didn't test it) a downloadable installer provides ASIO 2.0 drivers and a basic control panel to set buffer size.

The Monitor Volume control comes into play here; Input signals can be passed through to the Outputs at a level you select, from unity gain down to muted. Holding the Monitor button for 2 seconds lets you switch between hearing a mono mix of the two Inputs or hard-panned monitoring, In1 to OutL and In2 to OutR.

When working with a DAW, the Echo2 appears as a 2-in/4-out device; the headphone output can mirror the mains or have its own audio signal, letting you set up cue mixes or a separate headphone monitor mix if desired. It worked flawlessly with every application I tried on my Mac OS X (10.6.8 and 10.8.4) and Windows 7 test machines, and frankly it sounded glorious.

In A/B tests with my AudioFire2 on one of my test Macs, the Echo2 sounded at least as clear and open as my previous preferred standard listening interface, and noticeably better in some cases. I forgot to keep writing this review as I lost a fair number of hours just kicking back and listening to my high-res music collection through the Echo2 for sheer enjoyment.

Final thoughts, hopes and dreams

I'm not a huge fan of USB as an interface protocol for audio interfaces, just because USB tends to be shared with control surfaces and external hard disks that can cause bandwidth issues if you're not careful. That being said, one can't deny that in today's world, with FireWire going away and Thunderbolt not yet really well-situated, USB is the only practical choice for interfacing, and the Echo2 can't be faulted for going with ports everyone has.

However, I do miss MIDI and S/PDIF I/O. On the AudioFire2, this was accomplished with a multipin jack and a special cable ending in 5-pin DIN and coaxial RCA jacks. On the Echo2, even if there's no room for DIN jacks and a breakout cable is impractical, a USB-A passthrough port for an external MIDI control surface or interface would be a fantastic addition to a near-perfect portable music interface solution. I don't know how feasible it would be to add coaxial S/PDIF on RCA jacks or optical on Toslink ports without compromising the size and ruggedness of the box.

These minor gripes are my only issues with one amazing little interface. If Echo should ever decide to get completely out of the audio interface business, I will mourn; these guys have always had a very special take on combining compactness, flexibility, and near-unparalleled audio quality, and the Echo2 takes that recipe to a new level.

The Echo2's price tag may seem stiff for a 2-in/4-out box, until you realize that its competition is not found among the wide variety of affordable entry-level interfaces on the market. It should properly be compared to the upscale interfaces with world-class converters and onboard "smart" controls that are favored by discerning audio users. With that in mind, we're not talking about a portable audio interface that costs a lot more than the competition; we're talking about one that costs significantly less.

The Echo2 is elegant in form and function, easy to set up and use, and sounds exquisite. It should absolutely be on your short list of candidates for a no-holds-barred portable audio solution. ➤

Price: \$289

More from: Echo Digital Audio,
www.echoaudio.com